



#3

SEQUENCE LISTING

<110> Aventis Crop Science, N.V.
Trolinder, Linda
Gwyn, Jefferson
De Beuckeleer, Marc

<120> Herbicide Tolerant Cotton Plants and Methods for Producing and Identifying Same

<130> 58764.000033

<140> 09/921,922

<141> 2001-08-06

<160> 18

<170> PatentIn version 3.1

<210> 1

<211> 850

<212> DNA

<213> Artificial Sequence

<220>

<223> sequence comprising 5' flanking region

<400> 1

aaaggggatg agattgaatg ttaccttatc aacaaaagga gttgtagctc atggaacaac	60
aatagtcttt tccacggaaa cctagatgat gtttctcaa tgcttgataa atctttaaca	120
ttgtcatcat aagttgcaac ctcatgtttc acacaagcat caatcaaagtg ttgatcttca	180
ttactaaaat gtgcttgatc cttccttaca caaatctacc tatgttggtg tattttgttc	240
tattcatcat tctaacaagt tttgcaattg agttgaactt cttccaatct cgtatcagcc	300
tataatagtg ggggtctaata tgtccatttt tcccacaata atgacatata atctttctaa	360
agctttttatt ctctgcctta tgatgaaaag aacccaaatc tttaacttta acaaaaataa	420
gatgagcgat aggttcttca cttttattga tgtaaccaag tcctctatgg catgggtcaa	480
ttctcattga agccaaaatt tcatgaaact tctcacattg gcctctaaac ttcttcaaga	540
tagcctttgc accatctagc tcaactcttg ttgttttcaa aacatcatcc gtttcttgga	600
ccacaatttt gagcttttca ttttctattt tgaggataat agtttattcc ctcaaggaaac	660
tattcaactg agcttaacag tactcggccg tcgaccgagg taccggaat tccaatccca	720
caaaaatctg agcttaacag cacagttgct cctctcagag cagaatcggg tattcaaacac	780
cctcatatca actactacgt tgtgtataac ggtccacatg ccggtatata cgatgactgg	840
ggttgtacaa	850

<210> 2

<211> 20

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer GHI06

 <400> 2
 ttgcaccatc tagctcactc 20

<210> 3
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> primer GHI05

 <400> 3
 ggaccggttat acacaacgta g 21

<210> 4
 <211> 426
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> sequence comprising 3' flanking region

 <400> 4
 gattagagtc ccgcaattat acattttaata cgcgatagaa aacaaaatat agcgcgcaaa 60
 ctaggataaa ttatcgcgcg cgggtgcatc tatgttacta gatcgggaag atcctctaga 120
 gtcgacctgc aggcattgcaa gcttagatcc atggagccat ttacaattga atatatcctc 180
 caaatattta aaaagaatat caccattatc cgaatcttct ttaaaatctg ttagaacacg 240
 gtttggaata gtggtagtaa aagtaacata gttgctcgca tcttgatcta cattaaactt 300
 tcttcatcac tccaagtgat tgtaaatgac ttctatttct tcttagtatt agcacattct 360
 aattttaagt gaaacaatcc cttacattca taacattgaa tatccttcta tcatctcaca 420
 gcacga 426

<210> 5
 <211> 961
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> sequence comprising insertion region

 <400> 5
 aaaggggatg agattgaatg ttaccttatt aacaaaagga gttgtagctc atggaacaac 60
 aatagtcttt tccacggaaa cctagatgat gtttctccaa tgcttgataa atctttaaca 120

ttgtcatcat aagttgcaac ctcatgtttc acacaagcat caatcaaagtg ttgatcttca	180
ttactaaaat gtgcttgatc cttccttaca caaatctacc tatgttggtg tattttgttc	240
tattcatcat tctaacaagt tttgcaattg agttgaactt cttccaatct cgtatcagcc	300
tataatagtg gggctctaata tgtccatttt tcccacaata atgacatata atctttctaa	360
agcttttatt ctctgcctta tgatgaaaag aacccaaatc ttttaacttta acaaaaataa	420
gatgagcgat aggtttcttca cttttattga tgtaaccaag tcctctatgg catgggttcaa	480
ttctcattga agccaaaatt tcatgaaact tctcacattg gcctctaaac ttcttcaaga	540
tagcctttgc accatctagc tcaactcttg ttgttttcaa aacatcatcc gtttcttgga	600
ccacaatttt gagcttttca ttttctattt tgaggataat agtttattcc ctcaaggaaac	660
tattcaactg agcttaaata tcaatttttt ttaacatatg actataagta tcctccaaat	720
atttaaaaag aatatcacca ttatccgaat cttctttaaa atctgttaga acacgggttg	780
gaatagtggt agtaaaagta acatagttgc tcgcatcttg atctacatta aactttcttc	840
atcactccaa gtgattgtaa atgaacttcta tttcttctta gtattagcac attctaattt	900
taagtgaaac aatcccttac attcataaca ttgaatatcc ttctatcatc tcacagcacg	960
a	961

<210> 6
 <211> 9555
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> plasmid pGSV71

<400> 6	
agattcgaag ctoggtcccg tgggtgttct gtcgtctcgt tgtacaacga aatccattcc	60
cattccgcgc tcaagatggc ttcccctcgg cagttcatca gggctaaatc aatctagccg	120
acttgtccgg tgaaatgggc tgcactccaa cagaaacaat .caaacaaaca tacacagcga	180
cttattcaca cgcgacaaat tacaacggta tatatcctgc cagtactcgg ccgtcgaccg	240
cggtagcccg aattccaatc ccacaaaaat ctgagcttaa cagcacagtt gctcctctca	300
gagcagaatc gggatttcaa caccctcata tcaactacta cgttgtgtat aacgggtccac	360
atgccggtat atacgatgac tggggttgta caaaggcggc aacaaacggc gttcccggag	420
ttgcacacaa gaaatttgcc actattacag aggcaagagc agcagctgac gcgtacacaa	480
caagtcagca aacagacagg ttgaacttca tccccaaagg agaagctcaa ctcaagccca	540
agagctttgc taaggcccta acaagcccac caaagcaaaa agcccactgg ctcaogctag	600
gaacccaaaag gccagcagc gatccagccc caaaagagat ctcttttgcc ccggagatta	660

caatggacga tttcctctat ctttacgata taggaaggaa gttcgaaggt gaaggtgacg	720
acactatggt caccactgat aatgagaagg ttagcctctt caatttcaga aagaatgctg	780
acccacagat ggtagagag gcctacgcag caggtctcat caagacgata taccgagta	840
acaatctcca ggagatcaaa taccttccca agaagggttaa agatgcagtc aaaagattca	900
ggactaattg catcaagaac acagagaaaag acatatttct caagatcaga agtactattc	960
cagtatggac gattcaaggc ttgcttcata aaccaaggca agtaatagag attggagtct	1020
ctaaaaaggt agttcctact gaatctaagg ccatgcatgg agtctaagat tcaaatacgag	1080
gatctaacag aactcgccgt gaagactggc gaacagttca tacagagtct tttacgactc	1140
aatgacaaga agaaaatctt cgtcaacatg gtggagcacg acactctggg ctactccaaa	1200
aatgtcaaag atacagtctc agaagaccaa agggctattg agacttttca acaaaggata	1260
atttcgggaa acctcctcgg attccattgc ccagctatct gtcacttcat cgaaaggaca	1320
gtagaaaagg aaggtggctc ctacaaatgc catcattgag ataaaggaaa ggctatcatt	1380
caagatgcct ctgccgacag tgggtcccaa gatggacccc caccacgag gagcatcgtg	1440
gaaaaagaag acgttccaac cacgtcttca aagcaagtgg attgatgtga catctccact	1500
gacgtaaggg atgacgcaca atcccactat ccttcgcaag acccttctc tatataagga	1560
agttcatttc atttgagag gacacgctga aatcaccagt ctctctctat aaatctatct	1620
ctctctctat aaccatggac ccagaacgac gcccgccga catccgccgt gccaccgagg	1680
cggacatgcc ggcgggtctgc accatcgtca accactacat cgagacaagc acgggtcaact	1740
tccgtaccga gccgcaggaa ccgcaggagt ggacggacga cctcgtcctg ctgcggggagc	1800
gctatccctg gctcgtcgcc gaggtggacg gcgaggtcgc cggcatcgcc tacgcgggcc	1860
cctggaaggc acgcaacgcc tacgactgga cggccgagtc gaccgtgtac gtctcccccc	1920
gccaccagcg gacgggactg ggctccacgc tctacacca cctgctgaag tccctggagg	1980
cacagggtt caagagcgtg gtcgctgtca tcgggctgcc caacgaccgc agcgtgcgca	2040
tgcacgaggc gctcggatat gcccccgcg gcatgctgcg ggcggccggc ttcaagcacg	2100
ggaactggca tgacgtgggt ttctggcagc tggacttcag cctgccggta ccgccccgtc	2160
cggctctgcc cgtcaccgag atctgagatc acgcgttcta ggatccgaag cagatcgttc	2220
aaacatttgg caataaagtt tottaagatt gaatcctgtt gccgggtctt cgatgattat	2280
catataattt ctgttgaatt acgttaagca tgtaataatt aacatgtaat gcatgacgtt	2340
atttatgaga tgggttttta tgattagagt cccgcaatta tacatttaat acgcgataga	2400
aaacaaaata tagcgcgcaa actaggataa attatcgcg gcggtgtcat ctatgttact	2460

agatcgggaa gatcctctag agtcgacctg caggcatgca agcttagatc catggagcca	2520
tttacaattg aatatatcct gccgcgcgtg ccgctttgca cccggtggag cttgcatgtt	2580
ggtttctacg cagaactgag ccggttaggc agataatttc cattgagaac tgagccatgt	2640
gcaccttccc cccaacacgg tgagcgacgg ggcaacggag tgatccacat gggactttta	2700
aacatcatcc gtcggatggc gttgcgagag aagcagtcga tccgtgagat cagccgacgc	2760
accgggcagg cgcgcaacac gatcgcaaag tatttgaacg caggtacaat cgagccgacg	2820
ttcacggtag cggaacgacc aagcaagcta gcttagtaaa gccctcgcta gattttaatg	2880
cggatgttgc gattacttcg ccaactattg cgataacaag aaaaagccag cttttcatga	2940
tatatctccc aatttgtgta gggcttatta tgcacgctta aaaataataa aagcagactt	3000
gacctgatag tttggctgtg agcaattatg tgcttagtgc atctaacgct tgagttaagc	3060
cgcgccgcga agcggcgctg gcttgaacga attgtagac attatttgcc gactaccttg	3120
gtgatctcgc ctttcacgta gtggacaaat tcttccaact gatctgcgcg cgaggccaag	3180
cgatcttctt cttgtccaag ataagcctgt ctagcttcaa gtatgacggg ctgatactgg	3240
gccggcaggc gctccattgc ccagtcggca gcgacatcct tcggcgcgat tttgccgggt	3300
actgcgctgt accaaatgcg ggacaacgta agcactacat ttcgctcatc gccagcccag	3360
tcgggcggcg agttccatag cgttaagggt tcatttagcg cctcaaatag atcctgttca	3420
ggaaccggat caaagagttc ctccgccgct ggacctacca aggcaacgct atgttctctt	3480
gcttttgtca gcaagatagc cagatcaatg tcgatcgtgg ctggctcgaa gatacctgca	3540
agaatgtcat tgcgctgcca ttctccaaat tgcagttcgc gcttagctgg ataacgccac	3600
ggaatgatgt cgtcgtgcac aacaatggtg acttctacag cgcggagaat ctcgctctct	3660
ccaggggaag ccgaagtttc caaaaggctg ttgatcaaag ctgcgccgct tgtttcatca	3720
agccttacgg tcaccgtaac cagcaaatca atatcactgt gtggcttcag gccgccatcc	3780
actgcggagc cgtacaaaatg tacggccagc aacgtcgggt cgagatggcg ctcgatgacg	3840
ccaactacct ctgatagtgt agtcgatact tcggcgatca ccgcttcctt catgatgttt	3900
aactttgttt tagggcgact gccctgctgc gtaacatcgt tgctgctcca taacatcaaa	3960
catcgaccca cggcgtaacg cgcttgctgc ttggatgccc gaggcataga ctgtacccca	4020
aaaaaacagt cataacaagc catgaaaacc gccactgcgc cgttaccacc gctgcggtcg	4080
gtcaaggttc tggaccagtt gcgtgagcgc atacgctact tgcattacag cttacgaacc	4140
gaacaggctt atgtccactg ggttcgtgcc ttcacccggt tccacgggtg gcgtcaccgc	4200
gcaaccttgg gcagcagcga agtcgaggca tttctgtcct ggctggcgaa cgagcgcaag	4260
gtttcgggtc ccacgcacgc tcaggcattg gcggccttgc tgttcttcta cggcaagtgc	4320

tgtgcacgga	tctgccctgg	cttcaggaga	tcggaagacc	tcggccgtcc	gggcgcttgc	4380
cggtggtgct	gacccccgat	gaagtggttc	gcatacctcg	ttttctggaa	ggcgagcatc	4440
gtttgttcgc	ccagcttctg	tatggaacgg	gcatacggat	cagtgaggg	ttgcaactgc	4500
gggtcaagga	tctggatttc	gatcacggca	cgatacatcg	gcgggagggc	aagggctcca	4560
aggatcgggc	cttgatgtta	cccagagagc	tggcacccag	cctgcgcgag	cagggatcga	4620
tccaacccct	ccgctgctat	agtgcagtcg	gcttctgacg	ttcagtgcag	ccgtcttctg	4680
aaaacgacat	gtcgcacaag	tcctaagtta	cgcgacaggc	tgccgccctg	cccttttcct	4740
ggcgttttct	tgtcgcgtgt	tttagtcgca	taaagtagaa	tacttgcgac	tagaaccgga	4800
gacattacgc	catgaacaag	agcgccgccc	ctggcctgct	gggctatgcc	cgcgtcagca	4860
ccgacgacca	ggacttgacc	aaccaacggg	ccgaactgca	cgcggccggc	tgcaccaagc	4920
tgttttccga	gaagatcacc	ggcaccaggc	gcgaccgccc	ggagctggcc	aggatgcttg	4980
accacctacg	ccctggcgac	gttgtgacag	tgaccaggct	agaccgcctg	gcccgcagca	5040
cccgcgacct	actggacatt	gccgagcgca	tccaggaggc	cggcgcgggc	ctgcgtagcc	5100
tggcagagcc	gtgggcccgc	accaccacgc	cggccggccc	catggtgttg	accgtgttcg	5160
ccggcattgc	cgagttcgag	cgttccttaa	tcatcgaccg	cacccgagc	gggcgcgagg	5220
ccgccaaggc	ccgaggcggt	aagtttgccc	ccgcacctac	cctcaccctg	gcacagatcg	5280
cgcacgcccc	cgagctgatc	gaccaggaag	gccgcaccgt	gaaagaggcg	gctgcactgc	5340
ttggcggtgca	tcgctcgacc	ctgtaccgcg	cacttgagcg	cagcgaggaa	gtgacgcccc	5400
ccgaggccag	gcggcgcggt	gccttcctg	aggacgcatt	gaccgaggcc	gacgccctgg	5460
cggccgcccga	gaatgaacgc	caagaggaac	aagcatgaaa	ccgcaccagg	acggccagga	5520
cgaaccgttt	ttcattaccg	aagagatcga	ggcggagatg	atcgcgcccg	ggtacgtggt	5580
cgagccgccc	gcgcacgtct	caaccgtgcg	gctgcatgaa	atcctggccg	gtttgtctga	5640
tgccaagctg	gcggcctggc	cggccagctt	ggccgctgaa	gaaaccgagc	gccgccgtct	5700
aaaaaggtga	tgtgtatattg	agtaaaacag	cttgcgctcat	gcggtcgctg	cgtatatgat	5760
gcgatgagta	aataaacaaa	tacgcaagg	gaacgcatga	aggttatcgc	tgtacttaac	5820
cagaaaggcg	ggtcaggcaa	gacgaccatc	gcaaccatc	tagcccgcgc	cctgcaactc	5880
gcggggggcg	atgttctgtt	agtcgattcc	gatccccagg	gcagtggccg	cgattggggc	5940
gccgtgcggg	aagatcaacc	gctaaccgtt	gtcggcatcg	accgcccagc	gattgaccgc	6000
gacgtgaagg	ccatcgggcg	gcgcgacttc	gtagtgatcg	acggagcgcc	ccaggcgggc	6060
gacttggtcg	tgtccgcgat	caaggcagcc	gacttcgtgc	tgattccggt	gcagccaagc	6120

ccttacgaca	tatggggccac	cgccgacctg	gtggagctgg	ttaagcagcg	cattgaggtc	6180
acggatggaa	ggctacaagc	ggcctttgtc	gtgtcgcggg	cgatcaaagg	cacgcgcac	6240
ggcggtgagg	ttgccgaggc	gctggccggg	tacgagctgc	ccattcttga	gtcccgtatc	6300
acgcagcgcg	tgagctaccc	aggcaactgcc	gccgccggca	caaccgttct	tgaatcagaa	6360
cccgagggcg	acgctgcccc	cgaggtccag	gcgctggccg	ctgaaattaa	atcaaaactc	6420
at ttgagtta	atgaggtaaa	gagaaaaatga	gcaaaagcac	aaacacgcta	agtgccggcc	6480
gtccgagcgc	acgcagcagc	aaggctgcaa	cgttggccag	cctggcagac	acgccagcca	6540
tgaagcgggt	caactttcag	ttgccggcgg	aggatcacac	caagctgaag	atgtacgcgg	6600
tacgccaagg	caagaccatt	accgagctgc	tatctgaata	catcgcgag	ctaccagagt	6660
aaatgagcaa	atgaataaat	gagtagatga	at ttttagcgg	ctaaaggagg	cggcatggaa	6720
aatcaagaac	aaccaggcac	cgacgccgtg	gaatgcccc	tgtgtggagg	aacgggcggg	6780
tggccaggcg	taagcggctg	ggttgtctgc	cggccctgca	atggcactgg	aacccccaa	6840
cccaggaat	cggcgtgacg	gtcgcaaacc	atccggcccc	gtacaaatcg	gcgcggcgct	6900
gggtgatgac	ctggtggaga	agttgaaggc	cgcgcaggcc	gccagcggc	aacgcacga	6960
ggcagaagca	cgccccggtg	aatcgtggca	agcggccgct	gatcgaatcc	gcaaagaatc	7020
ccggcaaccg	cgggcagccg	gtgcgccgtc	gattaggaag	ccgcccagg	gcgacgagca	7080
accagatttt	ttcgttccga	tgctctatga	cgtgggcacc	cgcgatagtc	gcagcatcat	7140
ggacgtggcc	gttttccgtc	tgtcgaagcg	tgaccgacga	gctggcgagg	tgatccgcta	7200
cgagcttcca	gacgggcacg	tagaggtttc	cgcagggccg	gccggcatgg	ccagtgtgtg	7260
ggattacgac	ctggtactga	tggcgggttc	ccatctaacc	gaatccatga	accgataccg	7320
ggaaggggaag	ggagacaagc	ccggccgcgt	gttccgtcca	cacgttgccg	acgtactcaa	7380
gttctgccgg	cgagccgatg	gcggaaagca	gaaagacgac	ctggtagaaa	cctgcattcg	7440
gttaaacacc	acgcacgttg	ccatgcagcg	tacgaagaag	gccaagaacg	gccgcctggt	7500
gacggtatcc	gaggggtgaag	ccttgattag	ccgctacaag	atcgtaaaga	gcgaaaccgg	7560
gcggccggag	tacatcgaga	tcgagctagc	tgattggatg	taccgcgaga	tcacagaagg	7620
caagaaccgc	gacgtgctga	cggttcacc	cgattacttt	ttgatcgatc	ccggcatcgg	7680
ccgtttttct	taccgcctgg	cacgccgcgc	cgcaggcaag	gcagaagcca	gatggttggt	7740
caagacgata	tacgaacgca	gtggcagcgc	cggagagttc	aagaagttct	gtttcaccgt	7800
gcgcaagctg	atcggggtcaa	atgacctgcc	ggagtacgat	ttgaaggagg	aggcggggca	7860
ggctggcccc	atcctagtca	tgcgctaccg	caacctgata	gagggcgaag	catccgccgg	7920
ttcctaattgt	acggagcaga	tgctagggca	aattgcccta	gcaggggaaa	aaggtcgaaa	7980

aggctctcttt cctgtggata gcacgtacat tgggaaccca aagccgtaca ttgggaaccg	8040
gaacccgtac attgggaacc caaagccgta cattgggaac cggtcacaca tgtaagtgc	8100
tgatataaaa gagaaaaaag gcgatttttc cgcctaaaac tctttaaaac ttattaaaac	8160
tcttaaaacc cgctggcct gtgcataact gtctggccag cgcacagccg aagagctgca	8220
aaaagcgct acccttcggt cgctgcgctc cctacgcccc gccgcttcgc gtcggcctat	8280
cgcgcccgct ggccgctcaa aaatggctgg cctacggcca ggcaatctac cagggcgcg	8340
acaagccgcg ccgtcgccac tcgaccgccg gcgcccacat caaggcacc cgcctcgcg	8400
gtttcggtga tgacggtgaa aacctctgac acatgcagct cccggagacg gtcacagctt	8460
gtctgtaagc ggatgccggg agcagacaag ccgctcaggg cgcgtcagcg ggtgttggcg	8520
ggtgtcgggg cgcagccatg acccactcac gtagcgatag cggagtgtat actggcttaa	8580
ctatgcggca tcagagcaga ttgtactgag agtgcacat atgcggtgtg aaataccgca	8640
cagatgcgta aggagaaaat accgcctcag gcgctcttc gcttcctcgc tcaactgactc	8700
gctgcgctcg gtcgttcggc tcggcgagc ggtatcagct cactcaaagg cggtaatag	8760
gttatccaca gaatcagggg ataacgcagg aaagaacatg tgagcaaaag gccagcaaaa	8820
ggccaggaac cgtaaaaagg ccgcttgcg ggcggttttc cataggctcc gccccctga	8880
cgagcatcac aaaaatcgac gctcaagtca gaggtggcga aaccgacag gactataaag	8940
ataccaggcg tttccccctg gaagctccct cgtgcgctct cctgttcga ccctgccgct	9000
taccggatac ctgtccgcct ttctcccttc gggaaagcgtg gcgctttctc atagctcacg	9060
ctgtagggtat ctgagttcgg ttaggtcgt tcgctccaag ctgggctgtg tgcacgaacc	9120
ccccgttcag ccgaccgct gcgccttctc cggttaactat cgtcttgagt ccaaccgggt	9180
aagacacgac ttatcgccac tggcagcagc cactggtaac aggattagca gagegaggta	9240
tgtaggcggt gctacagagt tcttgaagtg gtggcctaac tacggctaca ctagaaggac	9300
agtatttggg atctgcgctc tgctgaagcc agttaccttc ggaaaaagag ttggtagctc	9360
ttgatccggc aaacaaacca ccgctggtag cgggtggtttt tttgtttgca agcagcagat	9420
tacgcgcaga aaaaaaggat ctcaagaaga tccggaaaac gcaagcgcaa agagaaagca	9480
ggtagcttgc agtgggctta catggcgata gctagactgg gcggttttat ggacagcaag	9540
cgaaccggaa ttgcc	9555

<210> 7
 <211> 4182
 <212> DNA
 <213> Artificial Sequence

<220>

<223> plasmid pRVA44

<400> 7

tgcgcggttt	cggatgatgac	ggtgaaaacc	tctgacacat	gcagctccc	gagacgggtca	60
cagcttgtct	gtaagcggat	gccgggagca	gacaagccc	tcagggcgcg	tcagcgggtg	120
ttggcgggtg	tcggggctgg	cttaactatg	cggcatcaga	gcagattgta	ctgagagtgc	180
accatacctg	caggcaattg	gtacctacgt	atgcatggcg	cgccatatgc	ccggggccctg	240
tacagcggcc	gcgttccctac	gcagcaggtc	tcacaaagac	gatctaccgc	agtaacaatc	300
tccaggagat	caaatacctt	cccaagaagg	ttaaagatgc	agtcaaaaga	ttcaggacta	360
attgcatcaa	gaacacagag	aaagacatat	ttctcaagat	cagaagtact	attccagtat	420
ggacgattca	aggtttgctt	cataaaccac	ggcaagtaat	agagattgga	gtctctaaaa	480
aggtagttcc	tactgaatct	aaggccatgc	atggagtcta	agattcaaag	cgaggatcta	540
acagaactcg	cgtgaagac	tggcgaacag	ttcatcacaga	gtcttttacg	actcaatgac	600
aagaagaaaa	tcttcgtcaa	catggtggag	cacgacactc	tgggtctactc	caaaaatgtc	660
aaagatacag	tctcagaaga	ccaaagggct	attgagactt	ttcaacaaag	gataatttcg	720
ggaaacctcc	tcggattcca	ttgccacagc	atctgtcact	tcacgaaag	gacagtagaa	780
aaggaagggtg	gctcctacaa	atgccatcat	tgcgataaag	gaaaggctat	cattcaagat	840
gcctctgccg	acagtgggtcc	caaagatgga	ccccaccca	cgaggagcat	cgtggaaaaa	900
gaagacgttc	caaccacgtc	ttcaaagcaa	gtggattgat	gtgacatctc	cactgacgta	960
agggatgacg	cacaatccca	ctatccttcg	caagaccctt	cctctatata	aggaagttca	1020
tttcattttg	agaggacacg	ctgaaatcac	cagtctctct	ctataaatct	atctctctct	1080
ctataacat	ggacccagaa	cgacgcccgc	ccgacatccg	ccgtgccacc	gaggcgggaca	1140
tgcgcggcgt	ctgcaccatc	gtcaaccact	acatcgagac	aagcacgggc	aacttccgta	1200
ccgagccgca	ggaaccgcag	gagtggacgg	acgacctcgt	ccgtctgcgg	gagcgctatc	1260
cctggctcgt	cgcgcagggtg	gacggcgagg	tcgccggcat	cgcctacgcg	ggccccctgga	1320
aggcacgcaa	cgcctacgac	tggacggccg	agtcgaccgt	gtacgtctcc	ccccgccacc	1380
agcggacggg	actgggctcc	acgtcttaca	cccacctgct	gaagtccttg	gaggcacagg	1440
gcttcaagag	cgtggctcgt	gtcatcgggc	tgcccaacga	cccgagcgtg	cgcacgcacg	1500
aggcgctcgg	atatgcccc	cgcggcatgc	tgcggggcgc	cggcttcaag	cacgggaact	1560
ggcatgacgt	gggtttcttg	cagctggact	tcagcctgcc	ggtaccgccc	cgtccgggtcc	1620
tgcccgctac	cgagatctga	tctcacgcgt	ctaggatccg	aagcagatcg	ttcaaacatt	1680
tggcaataaa	gtttcttaag	attgaatcct	gttgccgggc	ttgcgatgat	tatcatataa	1740

tttctgttga attacgttaa gcatgtaata attaacatgt aatgcatgac gttatztatg	1800
agatggggttt ttatgattag agtcccgcaa ttatacatTTT aatacgcgat agaaaacaaa	1860
atatagcgcg caaactagga taaattatcg cgcgcggtgt catctatgtt actagatcgg	1920
gaagatcctc tagagcgatc gcaagcttgg cgtaatcatg gtcatagctg tttcctgtgt	1980
gaaattgtta tccgctcaca attccacaca acatacgagc cggaagcata aagtgtaaag	2040
cctgggggtgc ctaatgagtg agctaactca cattaattgc gttgcgctca ctgcccgtt	2100
tccagtcggg aaacctgtcg tgccagctgc attaatgaat cggccaacgc gcggggagag	2160
gcgggtttgcg tattgggcgc tcttccgctt cctcgctcac tgactcgctg cgctcggtcg	2220
ttcggtgcg gcgagcggtg tcagctcact caaaggcggT aatacggtta tccacagaat	2280
caggggataa cgcaggaaag aacatgtgag caaaaggcca gcaaaaggcc aggaaccgta	2340
aaaaggccgc gttgctggcg tttttccata ggctccgccc ccctgacgag catcacaaaa	2400
atcgacgctc aagtcagagg tggcgaaacc cgacaggact ataaagatac caggcgtttc	2460
cccctggaag ctccctcgtg cgctctcctg ttccgacct gccgcttacc ggatacctgt	2520
ccgcctttct cccttcggga agcgtggcgc tttctcaaag ctacgctgt aggtatctca	2580
gttcggtgta ggtcgttcgc tccaagctgg gctgtgtgca cgaaccccc gttcagcccc	2640
accgctgcgc cttatccggt aactatcgtc ttgagtccaa cccggtaga caccgattat	2700
cgccactggc agcagccact ggtaacagga ttagcagagc gaggtatgta ggcggtgcta	2760
cagagttctt gaagtgggtg cctaactacg gctacactag aagaacagta tttggatatct	2820
gcgctctgct gaagccagtt accttcggaa aaagagttgg tagctcttga tccggcaaac	2880
aaaccaccgc tggtagcggT ggtttttttg tttgcaagca gcagattacg cgcagaaaaa	2940
aaggatctca agaagatcct ttgatctttt ctacggggtc tgacgctcag tggaacgaaa	3000
actcacgtta agggatTTTg gtcatgagat tatcaaaaag gatcttcacc tagatccttt	3060
taaattaaaa atgaagtttt aaatcaatct aaagtatata tgagtaaact tggctcgaca	3120
gttaccaatg cttaatcagt gaggcacctg tctcagcgat ctgtctatTTT cgttcatoca	3180
tagttgcctg actccccgtc gtgtagataa ctacgatacg ggagggtta ccatctggcc	3240
ccagtgtgc aatgataccg cgagaccac gtcacccggc tccagattta tcagcaataa	3300
accagccagc cggaagggcc gagcgcagaa gtggctcctgc aactttatcc gcctccatcc	3360
agtctattaa ttgttgccgg gaagctagag taagtagttc gccagttaat agtttgcgca	3420
acgttgttgc cattgctaca ggcacgtgg tgtcacgctc gtcgtttggT atggcttcat	3480
tcagctccgg ttcccaacga tcaaggcgag ttacatgatc ccccatgttg tgcaaaaaag	3540

```

cggttagctc cttcggtcct ccgacggttg tcagaagtaa gttggccgca gtgttatcac 3600
tcatggttat ggcagcactg cataattctc ttactgtcat gccatccgta agatgctttt 3660
ctgtgactgg tgagtactca accaagtcac tctgagaata gtgtatgcgg cgaccgagtt 3720
gctcttgccc ggcgtcaata cgggataata ccgcgccaca tagcagaact ttaaaagtgc 3780
tcatcattgg aaaacgttct tcggggcgaa aactctcaag gatcttaccg ctgttgagat 3840
ccagttcgat gtaaccact cgtgcaccca actgatcttc agcatctttt actttcacca 3900
gcgtttctgg gtgagcaaaa acaggaaggc aaaatgccgc aaaaaaggga ataagggcga 3960
cacggaaatg ttgaatactc atactcttcc tttttcaata ttattgaagc atttatcagg 4020
gttattgtct catgagcgga tacatatttg aatgtattta gaaaaataaa caaatagggg 4080
ttccgcgcac atttccccga aaagtgccac ctgacgtcta agaaaccatt attatcatga 4140
cattaaccta taaaaatagg cgtatcacga ggccctttcg tc 4182

```

```

<210> 8
<211> 16
<212> DNA
<213> Artificial Sequence

```

```

<220>
<223> primer MDB327

```

```

<220>
<221> misc_feature
<222> (1)..(1)
<223> "n" = a, t, c or g

```

```

<220>
<221> misc_feature
<222> (7)..(7)
<223> "w" = a or t

```

```

<220>
<221> misc_feature
<222> (10)..(10)
<223> "n" = a, t, c or g

```

```

<220>
<221> misc_feature
<222> (11)..(11)
<223> "w" = a or t

```

```

<220>
<221> misc_feature
<222> (14)..(14)
<223> "s" = g or c

```

<400> 8
ntgaggwtcn wgtsat

16

<210> 9
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer MLD015

<400> 9
tggttcctag cgtgagccag tg

22

<210> 10
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer MLD016

<400> 10
agctgctgct cttgcctctg t

21

<210> 11
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> primer MDB612

<220>
<221> misc_feature
<222> (1)..(1)
<223> "n" = a, t, c or g

<220>
<221> misc_feature
<222> (7)..(7)
<223> "s" = c or g

<220>
<221> misc_feature
<222> (8)..(8)
<223> "w" = a or t

<220>
<221> misc_feature
<222> (11)..(11)
<223> "n" = a, t, c or g

<220>

<221> misc_feature
<222> (13)..(13)
<223> "w" = a or t

<400> 11
ngtgctswga nawgat

16

<210> 12
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer MDB053

<400> 12
catgacgtgg gtttctggca gc

22

<210> 13
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer MDB356

<400> 13
aatcctgttg ccggtcttgc g

21

<210> 14
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> primer DPA017

<400> 14
gattagagtc ccgcaattat ac

22

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> primer MLD019

<400> 15
caagatgcga gcaactatgt

20

<210> 16
<211> 200
<212> DNA
<213> Artificial Sequence

<220>
<223> sequence comprising target site deletion

<400> 16
tcttggacca caatTTTgag cttttcattt tctatTTTga ggataatagt ttattccctc 60
aaggaactat tcaactgagc ttaatatctc aatTTTTttt aacatatgac tataagtatc 120
ctccaaatat ttaaaaagaa tatcaccatt atccgaatct tctttaaaat ctgttagaac 180
acggTTTgga atagtggtag 200

<210> 17
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer GHI01

<400> 17
aacctaggct gctgaaggag c 21

<210> 18
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> primer GHI02

<400> 18
caactcctcc agtcacTctcc g 21